Always Plan Your Emergencies

By Ltjg. Billy Walsh

I was thrilled to be deploying on a Gulf cruise within two months of arriving at my first fleet squadron. Being on an AFS meant we would get a lot of vertrep time under our belts.

We had had a few large vertrep hits on the transit out, and, once we got to the AOR, we weren't disappointed; the hits kept coming. It's a great feeling to be operational: "slinging the beans" for the Fifth Fleet.

We had two CH-46s and six pilots in the detachment, and we flew nearly every day. More than 90 percent of January's flight hours were operational, and February was to be just as busy. With this tempo, our training flight time was limited to shooting instrument approaches and FAM-SAR scenarios during lulls in the vertrep action.

With a tandem-rotor design, the H-46 is a superb aircraft for fleet logistics, but, T58 engines have a history of failures and roll-backs. An important part of our NATOPS brief is the plan for a single-engine failure and to which flight regimes an engine failure would be most critical.

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Helo Photo by Ssgt. Eric C. Tausch, Composite

The dynamics of a vertrep frequently places the helicopter without enough forward airspeed to maintain level flight, should an engine fail. This situation often is compounded with the weight of an external load. Sitting in a high hover is a particularly vulnerable situation; yet, it happens routinely during vertreps. For this reason, our OinC stressed to the three new H2Ps to have a plan for an engine failure every time we pulled into a high hover or any compromising situation. Furthermore, we should tell our plan to the crew and put the helicopter at an altitude and in a position to execute that plan if necessary.

Halfway through February, we had a routine, post-phase-A, functional-check flight (FCF). The engines hadn't been affected by the phase, so we primarily were concerned with checking the flight controls. After a couple of hours of on-deck checks, we lifted into a hover several hundred feet off the windward side of the ship.

The functional-check pilot (FCP) directed the FCF according to the checklist. I was the pilot at the controls and flew the required profiles, while the FCP and the crewmen recorded data. Originally, we had wanted to be in a 30-foot hover, so, if we lost an engine, we already would be in ground effect. However, at that altitude, we'd be taking on salt spray from our rotor wash, so we climbed to 50 feet.

I announced, "We're at 50 feet. If we lose an engine, we'll settle straight down" (as opposed to dropping the nose, picking up speed, and flying out of a higher hover). That call had become habit in the cruise.

Our next check required us to face 90 degrees away from the windline. I pedal-turned to the right and immediately felt a loss of power. The FCP called out, "Engine failure!"

I responded, "Settling," while pedal-turning back into the wind and oncoming waves. The FCP took the controls from me just before we hit the water. He held us upright in the water, keeping the nose high enough to prevent the chin bubbles from being broken by the oncoming waves. The two crewmen were strapped into their seats and reported we still had watertight integrity. They started calling out the single-engine checklist. We knew our best bet was for everyone to stay calm and for each to perform his role in working through the emergency. After interpreting the engine gauges, we told tower what was going on and prepared for an engine restart.

Everything was happening slowly and methodically. I even had time to close my window, figuring the splashes in my face soon would be distracting. We dumped fuel and started the APU. At this point, the waves broke open the "hellhole" door on the bottom of the fuselage, and water started splashing into the cabin. The second crewman jumped on the door and held it down, while backing me up on the engine-restart checklist. Fortunately, the engine fired up to full power on the first restart attempt and immediately plucked us out of the water and into a forward-flight transition.

On our way around the ship for our approach, we "cleaned up" from the emergency and prepared for a normal landing, keeping in mind we could lose the engine again at any time. The landing was uneventful. The aircraft required considerable cleaning after its saltwater bath, but all the maintenance crew welcomed us back on deck, anyway, with handshakes and cheers.

Good aircrew coordination between the cockpit and the crew and a calm approach to a survivable situation were instrumental in getting us back on deck. Having a plan for the initial reaction to an emergency, coupled with some good karma (always a factor), was the key to success this day. I realize from this experience why we make it a point to be ready for an engine failure at all times during every flight. Never get lax, even after being in the groove of a long VertRep. Some great flying and powerful lessons made for a memorable first cruise.

Ltjg. Walsh flies with HC-5 Det 3.